

Appl. No. 09/235,155
Amdt. dated: March 10, 2004
Reply to Office Action of October 6, 2003

Docket No. SUN-P3710
(811173-000121)

Remarks/Arguments begin on page 21 of this paper.

REMARKS/ARGUMENTS

Claim Status and Amendment to the Claims

Claims 1 and 25-64 are now pending.

No claims stand allowed.

Claims 2-24 have been cancelled, without prejudice or disclaimer.

Claims 1, 35, 37, 39, 40, 41, 43, 45, 46, 47, 48, and 49 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. The text of claims 25-34, 36, 38, 42, and 44 is unchanged, but their meaning is changed because they depend from amended claims. No "new matter" has been added by the Amendment.

New claims 50-64 have been added by this Amendment and also particularly point out and distinctly claim subject matter regarded as the invention.

The Amendment also contains minor changes of a clerical nature. No "new matter" has been added by the Amendment.

The 35 U.S.C. §103 Rejection

Claims 1 and 25-49 stand rejected under 35 U.S.C. §103(a) as being allegedly

unpatentable over Everett et al.¹, background in view of de Jong^{2,3}. This rejection is respectfully traversed.

According to the M.P.E.P.,

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.⁴

Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.⁵ *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Claim 1

Claim 1 as amended recites:

A small footprint device comprising:
at least one processing element configured to execute groups of one or more program modules in separate contexts, said one or more program modules *comprising zero or more sets of executable instructions and zero or more sets of data definitions, said zero or more sets of executable instructions and said zero or more data definitions grouped as object definitions, each context comprising a protected object instance space such that at least one of said object definitions is instantiated in association with a particular context;*
a memory comprising instances of objects;
a context barrier for separating and isolating said contexts, said context barrier configured for controlling execution of at least one instruction of one of said zero or more sets of instructions comprised by a program module *based at least in part on whether*

¹ USP 6,220,510.

² USP 5,802,519.

³ Office Action dated October 6, 2003 ¶ 4.

⁴ MPEP § 2143.

⁵ *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

said at least one instruction is executed for an object instance associated with a first one of said one or more separate contexts and whether said at least one instruction is requesting access to an instance of an object definition associated with a second one of said one or more separate contexts, said context barrier further configured to prevent said access if said access is unauthorized and enable said access if said access is authorized; and
one context having access to all program modules without context barrier constraints.

The Examiner states:

As to claim 1, Everett teaches a small footprint device (IC card, also called smart card, p5 22-36) comprising at least one processing element (computer chip including a microprocessor, Id.) a memory (random access memory, Id.) a context barrier for isolating program modules from one another (each application program stored on the IC card is allocated a memory space, p7 1940) said program modules configured to operate on said small footprint device (interaction between the two applications stored on the card, Id.) Everett does not explicitly disclose the additional limitations detailed below. De Jong teaches a data exchange system for smart cards and one context (interaction context, p12 51-55) having access to all program modules without context barrier constraints (open any of the other applications, Id.). It would have been obvious to combine De Jong's teachings with Everett because the context mechanism defined by De Jong (p6 23-25) "leads to a wider range of smart card use" and, thus provides more features/services for users.⁶

Embodiments of the present invention describe objects as being *owned by a context*.

With this Amendment, claim 1 has been modified to make this distinction more clear.

Specifically, amended claim 1 recites in part "each context comprising a protected object instance space such that at least one of said object definitions is instantiated in association with a particular context." Amended claim 1 also specifies that the context barrier is configured for controlling execution of at least one instruction of one of zero or more sets of instructions comprised by a program module based at least in part on whether the at least one instruction is executed for an *object instance associated with a first one of said one or more separate contexts* and whether the at least one instruction is requesting access to an instance of an *object definition*

⁶ Office Action ¶ 4.

associated with a second one of the one or more separate contexts. These amendments find support in the Specification at page 19, lines 18-24, JCRE 2.1 Specification, § 6.1 (Appendix to Specification), and FIGS. 5-11 and 16-18.

Accordingly, it is respectfully requested that the rejection 35 U.S.C. § 103 be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Independent Claims 35, 37, 39-41, 43, and 45-49

With this Amendment, independent claims 35, 37, 39-41, 43, and 45-49 have been amended to include limitations similar to claim 1. Claim 1 being allowable, claims 35, 37, 39-41, 43, and 45-49 must also be allowable for at least the same reasons.

Dependent Claims 25-34, 36, 38, 42, and 44

Claims 25-34, 36, 38, 42, and 44 depend from claims 1, 35, 37, 41, and 43, respectively. The base claims being allowable, the dependent claims must also be allowable. Accordingly, it is respectfully requested that the 35 U.S.C. §103 rejection of claims 25-34, 36, 38, 42, and 44 be withdrawn.

New Claims

New claims 50-61 particularly point out and distinctly claim subject matter regarded as the invention. Claims 50, 53, 56, 59, and 62 specify that an object instance is associated with a context by recording the name of the context in a header of the object instance, where

information in the header is inaccessible to the one or more program modules (the executing code). Claims 51, 54, 57, 60 and 63 specify that a memory comprises object header data that comprises information associated with at least one of the instances of objects in the memory, and that controlling execution is based at least in part on the object header data. Claims 52, 55, 58, and 61 specify that the memory is partitioned into multiple memory spaces with instances of objects allocated for storage in one of the storage spaces, and that controlling execution is based at least in part on determining the storage space allocated to an executing object instance and an accessed object instance.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

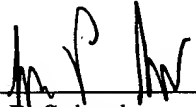
Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
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